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**Chakravarthy et al.**

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(54) **SYSTEM AND METHOD FOR MONITORING AND CLASSIFYING ATRIAL FIBRILLATIONS**

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See application file for complete search history.

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(57) **ABSTRACT**

A system and method of detecting and classifying atrial fibrillations (AFs) monitors an electro-cardiogram (ECG) signal of the patient. Based on the monitored ECG signals, AF episodes are detected. Monitored physiological parameters are utilized to determine an activity level of the patient at the time of the detected AF episode, wherein the activity level is associated with the detected AF episode. The etiology of the detected AF episodes is classified as adrenergic if the AF episodes occur while the patient is active, and classified as vagal if the AF episodes occur while the patient is at rest.

**15 Claims, 15 Drawing Sheets**

